
DEPARTMENT OF TRANSPORTATION**Research and Special Programs
Administration****49 CFR Parts 171, 172, 173, 174, 175,
176, 177****[Docket No. HM-169, Amdt. Nos. 171-71,
172-78, 173-162, 174-42, 175-26, 176-15,
177-57]****Requirements for Transportation of
Radioactive Materials; Corrections and
Clarifications****AGENCY:** Material Transportation Bureau
(MTB), Research and Special Programs
Administration, DOT.**ACTION:** Final rule.**SUMMARY:** The purpose of this final rule
is to make a number of corrections and
clarifications to final rules published in
the March 10, 1983, issue of the *Federal
Register* (48 FR 10218).**EFFECTIVE DATE:** July 1, 1983, unless
otherwise specified by the regulations.**FOR FURTHER INFORMATION CONTACT:****R. R. Rawl, Office of Hazardous
Materials Regulation, Materials
Transportation Bureau, U.S. Department
of Transportation, 400 7th Street, S.W.,
Washington, D.C. 20590, telephone
number (202) 426-2311.**

SUPPLEMENTARY INFORMATION:**I. Background**

This action by MTB amends, corrects, and clarifies a final rule published in the Federal Register on March 10, 1983 (48 FR 10218). Some of these amendments are corrections of errors which had not been discovered in proofreadings of the document. Other changes are made in response to inquiries from shippers and carriers of radioactive materials who questioned the accuracy of particular requirements as stated.

Although MTB indicated in the March 10, 1983, publication of this final rule that it may extend the effective date, depending on the publication and effective date of corresponding amendments to 10 CFR Part 71 by the Nuclear Regulatory Commission, it has since been determined that the July 1, 1983, date will stand.

II. Review by Sections

Section 171.11 is amended to use in paragraph (d)(6)(i) the new terminology for large quantity shipments.

Paragraph (d)(6)(ii) is amended to clearly indicate that these requirements also apply to Type B(U) and Type B(M) packages of radioactive materials.

Paragraph (d)(6)(iv) is amended to reflect a recent amendment in another rulemaking which eliminated the requirement for shipping papers for limited quantity shipments.

Section 171.12 is amended to add a specific requirement that packages transported by air conform with end use and transport index limitations specified in the Hazardous Materials Regulations.

Section 172.101 is amended to show the reportable quantity value (RQ-5000/2270) as an italicized entry, for the materials uranyl acetate, uranyl nitrate hexahydrate solution, and uranyl nitrate, solid.

The entry for thorium nitrate is amended to show its correct spelling.

The entry for uranium hexafluoride is amended to show its correct spelling and by increasing the maximum permitted amount of uranium—235 from 0.72% to 1%. This increase is considered desirable in order to maintain a consistency with the exception contained in § 173.453(d).

Section 172.400 is amended to broaden the scope of paragraph (b)(10) by changing the term "transport vehicle" to "conveyance".

Section 172.403 is amended by changing the first entry in the table to paragraph (c). As it is impossible to have a transport index of absolute zero, the entry "T.I.=0" now reads "N/A".

Section 172.504 is amended in Table 1 to increase the maximum permitted

amount of uranium—235 from 0.72% to 1%. This increase is considered desirable in order to maintain a consistency with the exception contained in § 173.453(d).

Section 173.403 is amended by changing the word "authorized" in paragraph (c) to read "unauthorized", and by clearly indicating that the term "vehicle" in paragraph (c) refers to "transport vehicle" as defined in § 171.8.

Paragraph (e) is revised to more clearly indicate the meaning of a conveyance as that term applies to shipments of radioactive materials.

Paragraph (i) is amended to clearly indicate that exclusive use shipments must be handled under specific written instructions provided by the shipper to the carrier.

Paragraph (m) is revised to clarify the definition of limited quantity radioactive material.

Paragraph (n)(4) is revised to more clearly indicate the measure of radioactivity permitted for various nonradioactive materials which are contaminated with radioactive materials.

Paragraph (u) is amended to broaden its scope by changing the term "vehicle" to "conveyance".

Paragraph (w) is amended to include the term radioactive instrument in the same definition with radioactive article.

Paragraph (ee) is amended to specify that the term "Type B(M)" refers to the package.

Section 173.411 is amended to clearly indicate that the term device refers to radioactive articles and radioactive instruments.

Section 173.412 is amended to more clearly indicate that the requirements of paragraph (m)(2) apply to all radiation levels emanating from the package rather than just the highest.

Section 173.415 is amended to indicate the OMB control number for the information collection requirement in paragraph (a).

Paragraph (d) is amended to more clearly indicate when foreign made packagings may be used. This provides for reciprocity with other countries. It permits use of foreign made packagings only when they were first used to import radioactive materials into the United States.

Section 173.416 is amended to clearly indicate in paragraph (b) that Type B packages approved for purely domestic shipments are also authorized containers.

Paragraph (c) is amended to indicate the correct citation for foreign made Type B(U) and Type B(M) packagings which have been revalidated by DOT.

Section 173.417 is amended by changing the first use of the word "of" in paragraph (a)(3)(ii) to "for", for clarity.

Paragraphs (a)(4) and (a)(5) are amended to indicate that Type B(U) and Type B(M) packagings may also be used for the shipment of fissile materials.

Paragraph (a)(5) is amended to indicate the correct citation for foreign made packagings which have been revalidated by DOT.

Paragraph (a)(6)(iv) is amended by adding a semicolon before the word "or" to indicate that other equivalent methods of venting the drum are permitted.

Table 3 is amended to complete the entry for the 14 ton cylinder.

Paragraph (b)(2)(ii) is amended to broaden its scope by adding the term "conveyance".

Paragraph (b)(3) is amended to clearly indicate that Type B packagings approved for purely domestic shipments are also authorized containers.

Paragraph (b)(5) is amended by removing the semicolon and correcting the spelling of the word "hexafluoride".

Section 173.422 is amended to more clearly indicate that Table 7 is the table referred to in paragraph (a).

Paragraphs (a), (c), and (d) are amended to use the proper designation for radioactive instruments and articles.

Paragraph (g) is removed as it has since been determined that the requirement does not assure the intended benefit of minimum package dimensions.

Section 173.423 is amended to reflect the proper shipping description for radioactive articles.

Section 173.424 is amended to include the word "durable" in paragraph (a) to indicate that it must be capable of retaining the uranium or thorium.

Section 173.425 is amended to indicate the OMB control numbers for the information collection requirements in paragraphs (b)(9) and (c)(7).

Paragraphs (b)(4) and (c)(4) are amended to broaden their scope by changing the term "transport vehicle" to "conveyance or freight container".

Paragraph (b)(5) is amended to broaden its scope by changing the term "car or vehicle" to "conveyance".

Paragraph (c)(1)(iv) is amended to reflect the correct spelling and measure of external contamination that is permitted for radionuclides having an A_2 value equal to or higher than 50 millicuries. The maximum permissible fixed contamination for those materials is 0.001 millicurie.

Section 173.427 is revised to indicate that the multiple is 100 and it applies to

any method used to ascertain compliance with § 173.443(a).

Section 173.431 is revised to clarify requirements of paragraph (a) regarding the maximum permissible activity of radioactive materials in Type A packages.

Paragraph (b) is amended to clearly indicate that Type B packages approved for purely domestic shipments are also subject to this requirement, and a section reference is corrected to show the proper citation for packagings which have been revalidated by DOT.

Section 173.433 is amended to show the correct expression of the denominator in paragraph (b)(3), and by changing the word "Were" in paragraph (b)(5) to "When".

Section 173.435 is amended by deleting the column "Specific Activity (Ci/g)", correcting A_1 and A_2 values, and making other changes to the table for the following materials:

Protactinium is amended to show its correct spelling.

For Thulium-170 the A_2 value is changed from 40 to 10.

For Thulium-171 the A_2 value is changed from 10 to 100.

Section 173.441 is amended to indicate the OMB control number for the information collection requirement in paragraph (c).

Paragraph (b) is amended to remove the exception concerning shipments by aircraft since this is now stated in paragraph (d) as being prohibited transportation.

Paragraphs (b)(1)(ii), (b)(2), (b)(3) and (b)(4) are amended to clarify that the term "vehicle" actually refers to "transport vehicle" as defined in § 171.8.

Paragraph (d) is added to clearly state that packages having a transport index greater than 10 or a surface radiation level greater than 200 millirem per hour are not permitted to be transported by aircraft.

Paragraph (e) is added to specify that the instructions required for exclusive use shipments must be so written that unnecessary radiation exposures or delay in transit will be avoided.

Section 173.443 is amended to clarify that Table 10 applies to levels of contamination removed by wiping. The levels given in table 10 only appear to be less than the old values because they are now given for "swipe sample" values. It is conservatively estimated that swipes only remove 10% of the contamination so the end result is the same as that achieved using the previous table which then had to be corrected to "swipe sample" values.

Paragraph (b) is amended to clearly indicate that the contamination limit at the beginning of transport may not

exceed the § 173.443(a) limits, but that as a result of "weeping", may rise by a factor of ten if transported under exclusive use conditions.

Paragraph (d) is amended to specify that its provisions apply only to shipments by public highway.

Section 173.448 is amended by changing the first use of the term "number of curies" appearing in paragraph (g)(1)(ii) to read "activity", to reflect terminology which appears on the updated labels.

Section 173.453 is amended to correct the spelling of fissile and to more clearly indicate the application of the exception in paragraph (c)(3).

Section 173.455 is amended to clarify that use of the term "vehicle" in paragraph (b) actually refers to "conveyance and transport vehicle".

Section 173.457 is amended to indicate the OMB control number for the information collection requirements in paragraph (b).

Paragraph (b) is amended to broaden its scope by changing the words "transport vehicle" to the term "conveyance (transport vehicle if shipped by road or rail)", and by clearly indicating that escorts are not to travel in the same transport vehicle with Fissile Class III shipments.

Section 173.459 is amended to broaden the scope of paragraph (a) by changing the words "transport vehicle" to "conveyance (transport vehicle if shipped by road or rail)".

Paragraph (b) is amended to clearly indicate that the total transport index limit of 50 applies to the conveyance or vehicle, as appropriate.

Section 173.461 is amended to more clearly state the requirements of paragraph (a).

Section 173.465 is amended to more clearly indicate that the requirements of paragraph (a) address both the packaging and its contents.

Paragraph (b) is amended to use the correct spelling of centimeters.

Table 11 is amended to more clearly indicate the cutoff point for packagings weighing 22,000 pounds.

Paragraph (d)(2) is amended to correct the area of the package surface used in computing the compressive load. The critical surface is the horizontal area and not the vertical area. Also, the conversion of 1300 kilograms per square meter is corrected to read 265 pounds per square foot.

The section is now headed "Type A packaging tests" for clarity.

Section 173.469 is amended by changing the word "to" in paragraph (b)(2)(iv) to "of".

Paragraph (a) is amended to more clearly indicate that non-radioactive

materials may be used in testing for special form.

Paragraph (b)(3)(v) is amended to show the proper dimensions and tolerances of the billet.

Section 173.471 is amended to more clearly indicate, in the introductory text, that shippers of Type B(U) and Type B(M) packages are also subject to the requirements of this section.

Section 173.473 is amended to more clearly indicate, in the introductory text, that shippers of Type B(U) and Type B(M) packages are also subject to the requirements of this section.

Paragraph (d) is redesignated (e) and a new paragraph (d) is added to clearly specify that all requirements of the foreign competent authority certificate and DOT revalidation of that certificate must be fulfilled.

Section 173.475 is amended to change the word "improperly" in paragraph (f) to read "properly".

Section 173.476 is amended by adding a provision in paragraph (a) that permits shippers to comply with the requirement to maintain records on shipments of special form radioactive materials by means of either a U.S. or foreign Competent Authority Certificate.

Paragraph (b) is amended to clarify that special form radioactive materials that were approved by a foreign Competent Authority and shipped to the United States may later be exported without need of another certificate issued by the DOT. Also, the fourth sentence of paragraph (b) is clarified to address only those petitions for a U.S. Competent Authority Certificate.

Paragraph (c) is amended to reflect the correct punctuation in the proper shipping name.

Section 173.477 is amended to indicate the OMB control number for the information collection requirement in paragraph (b), and by broadening the scope of paragraph (b)(2) by changing the word "vehicle" to "conveyance".

Section 173.478 is amended to indicate the OMB control number for the information collection requirements in paragraphs (b) and (c).

Section 174.700 is amended to clarify that use of the term "vehicle" in paragraph (g)(2) actually refers to "rail car", as indicated in paragraph (g)(1), and the regulatory language is corrected by using the imperative "shall".

Paragraph (g)(3) is added to assure adequate radiation protection to train crews and personnel escorting the shipment.

Section 175.703 is amended by revising paragraph (e) to clarify that packages with a transport index greater than 10 are also included in the

prohibition from transportation by aircraft.

Paragraph (c)(1) is amended to use the preferred term "exclusive use".

Section 176.700 is amended to more clearly state the requirements of paragraphs (c) and (d).

Section 177.842 is amended to clarify that use of the term "vehicle" in paragraph (g) actually refers to "motor vehicle" as defined in § 171.8.

Administrative Notices

A. Non-Major Rule. The MTB has previously determined that this regulatory amendment is not a major rule under terms of Executive Order 12291 or significant under DOT's regulatory procedures (44 FR 11034), and does not require a Regulatory Impact Analysis, nor does it require an environmental impact statement under the National Environmental Policy Act (42 U.S.C. 4321 et seq.).

B. Impact on Small Entities. Based on limited information available concerning size and nature of entities likely to be affected, I certify that this amendment will not, as promulgated, have a significant economic impact on a substantial number of small entities. Small businesses potentially affected include manufacturers, distributors, carriers, and users of: radiopharmaceuticals; (2) measuring, detecting, calibrating devices which employ radioactive materials; and (3) packagings specifically designed for use in the transportation of radioactive materials. The economic impact on such small entities will be minimal.

C. Paperwork Reduction Act. Information collection requirements contained in these regulations (§§ 173.415, 173.425 (b) and (c), 173.441 (c), 173.457 (b), 173.477 (b), and 173.478 (b) and (c)) have been approved by the Office of Management and Budget and assigned control numbers indicated in the regulatory text of this document.

List of Subjects

49 CFR Part 171

Exports, Hazardous materials transportation, Imports.

49 CFR Part 172

Hazardous materials transportation.

49 CFR Part 173

Hazardous materials transportation, Packaging and containers.

49 CFR Part 174

Hazardous materials transportation, Railroad safety.

49 CFR Part 175

Hazardous materials transportation, Air carriers, Radioactive materials.

49 CFR Part 176

Hazardous materials transportation, Maritime carriers.

49 CFR Part 177

Hazardous materials transportation, Motor carriers.

In consideration of the foregoing, Parts 171, 172, 173, 174, 175, 176 and 177 of Title 49, Code of Federal Regulations are amended as follows:

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

§ 171.11 [Amended]

1. In § 171.11, paragraph (d)(8)(i) is amended by removing the words "large quantity" and inserting, in their place, the words "highway route controlled quantity"; paragraph (d)(8)(ii) is amended by adding the words "Type B(U), Type B(M)", immediately following the letter "B"; and paragraph (d)(6)(iv) is amended by removing the words "and require shipping papers when transported by public highway".

2. In § 171.12, paragraphs (e)(1) and (e)(3) and (4) are revised; and paragraph (e)(5) is added to read as follows:

§ 171.12 Import and export shipments.

(e) * * *

(1) Highway route controlled quantities (see § 173.403 of this subchapter) are shipped in accordance with §§ 172.203(d)(1)(iii), 172.507, 173.22(c), and 177.825 of this subchapter;

(3) Type A package contents shall be limited in accordance with § 173.431 of this subchapter;

(4) The country of origin for the shipment has adopted the IAEA "Regulations for the Safe Transport of Radioactive Materials, Safety Series No. 6, 1973, Revised Edition (as amended)"; and

(5) The requirements of § 173.448(e), (f), and (g)(3) of this subchapter are fulfilled, when applicable.

PART 172—HAZARDOUS MATERIALS TABLES AND HAZARDOUS MATERIALS COMMUNICATIONS REGULATIONS

§ 172.101 [Amended]

3. In § 172.101, the Hazardous Materials Table is amended by: removing the proper shipping names "Thorium nitrate", "Uranium hexafluoride, fissile (containing more than 0.72% U-235)", "Uranyl acetate

(RQ-5000/2270)", "Uranyl nitrate hexahydrate solution (RQ-5000/2270)", and "Uranyl nitrate, solid (RQ-5000/2270)" and inserting, in their respective places, the proper shipping names "Thorium nitrate", "Uranium hexafluoride, fissile (containing more than 1% U-235)", "Uranyl acetate (RQ-5000/2270)", "Uranyl nitrate hexahydrate solution (RQ-5000/2270)", and "Uranyl nitrate, solid (RQ-5000/2270)".

§ 172.400 [Amended]

4. In § 172.400, paragraph (b)(10) is amended by removing the words "transport vehicle" and inserting, in their place, the word "conveyance".

§ 172.403 [Amended]

5. In § 172.403, paragraph (c) is amended by removing the table entry "T.I.—O" and inserting, in its place, the entry "N/A".

§ 172.504 [Amended]

6. In § 172.504, Table 1 is amended by removing the figure "0.7" in both of the entries for uranium hexafluoride and inserting, in its place, the figure "1.0".

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

7. In § 173.403, paragraph (c) is amended by removing the word "authorized" and inserting, in its place, the word "unauthorized", and by adding the word "transport" immediately preceding the word "vehicle"; paragraph (u) is amended by removing the word "vehicle" and inserting, in its place, the word "conveyance"; and paragraph (w) is amended by removing the word "devices" in both instances and inserting, in its place, the words "instruments and articles"; paragraph (ee) is amended by adding the word "package" to the quoted text "Type B(M)", and paragraphs (e), (i), (m) and (n)(4) are revised to read as follows:

§ 173.403 Definitions.

(e) "Conveyance" means—

(1) For transport by public highway or rail: any transport vehicle or large freight container;

(2) For transport by vessel: any vessel, or any hold, compartment, or defined deck area of a vessel; and

(3) For transport by aircraft: any aircraft.

(i) "Exclusive use" (also referred to in other regulations as "sole use" or "full load") means the sole use of a conveyance by a single consignor and

for which all initial, intermediate, and final loading and unloading are carried out in accordance with the direction of the consignor or consignee. Specific instructions for maintenance of exclusive use shipment controls must be issued in writing and included with the shipping paper information provided to the carrier by the consignor.

(m) "Limited quantity of radioactive material" means a quantity of radioactive material not exceeding the materials package limits specified in § 173.423 and which conform with requirements specified in § 173.421.

(n) ***

(4) Material in which the radioactivity is essentially uniformly distributed and in which the estimated average concentration of contents does not exceed:

- (i) 0.0001 millicurie per gram of radionuclides for which the A_2 quantity is not more than .05 curie;
- (ii) 0.005 millicurie per gram of radionuclides for which the A_2 quantity is more than .05 curie, but not more than 1 curie; or
- (iii) 0.3 millicurie per gram of radionuclides for which the A_2 quantity is more than 1 curie.

§ 173.411 [Amended]

8. In § 173.411, the introductory text is amended by removing the word "device" and inserting, in its place, the words "instrument or article".

9. In § 173.412, paragraph (m)(2) is revised to read as follows:

§ 173.412 Additional design requirements for Type A packages.

(m) ***

(2) Any significant increase in the radiation levels recorded or calculated at the external surfaces for the condition before the test;

10. In § 173.415, paragraph (a) is amended by adding the parenthetical statement "(Approved by the Office of Management and Budget under OMB control number 2137-0533)" at the end of the paragraph, and paragraph (d) is revised to read as follows:

§ 173.415 Authorized Type A packages.

(d) Any foreign made packaging that bears the marking "Type A" and which was used for the import of radioactive materials. Such packagings may be subsequently used for domestic and export shipments of radioactive materials. These packagings shall conform with requirements of the

country of origin (as indicated by the packaging marking) applicable to Type A packagings.

§ 173.416 [Amended]

11. In § 173.416, paragraph (b) is amended by adding the term "Type B," immediately following the word "Any"; and paragraph (c) is amended by removing the section reference "173.472" and inserting in its place, the reference "173.473".

§ 173.417 [Amended]

12. In § 173.417, paragraph (a)(3)(ii) is amended by removing the word "of" immediately preceding the word "each" and inserting, in its place, the word "for"; paragraphs (a)(4) and (a)(5) are amended by adding the words ", Type B(U), or Type B(M)" after the word "Type B"; paragraph (a)(5) is amended by removing the section reference "§ 173.472" and inserting, in its place, the reference "§ 173.473"; Table 3 is amended by adding the numbers "4.5, 22.7, 50, .690 and 1.52" in the last row and at columns 5-9, respectively; paragraph (a)(6)(iv) is amended by adding a semicolon immediately following the word "tape"; paragraph (b)(2)(ii) is amended by adding the words "per conveyance and" immediately preceding the word "per"; paragraph (b)(3) is amended by adding the words "Type B, or" at the beginning of the sentence; and paragraph (b)(5) is amended by correcting the spelling of the word "hexafluoride", and by removing the semicolon which follows the word "uranium".

§ 173.422 [Amended]

13. In § 173.422, paragraph (a) is amended by removing the words "the table" and inserting, in their place, the words "Table 7"; paragraphs (a), (c), and (d) are amended by removing the word "device" and inserting, in its place, the word "article"; paragraph (e) is amended by adding the word "and" at the end of that clause; paragraph (f) is amended by removing the semicolon and the word "and" and inserting, in its place, a period; and paragraph (g) is removed.

§ 173.423 [Amended]

14. In § 173.423, the section heading, introductory text, and table heading are amended by removing the word "devices" and inserting, in its place, the word "articles", as appropriate.

§ 173.424 [Amended]

15. In § 173.424, paragraph (a) is amended by adding the word "durable" immediately following the word "other".

§ 173.425 [Amended]

16. In § 173.425, paragraph (b) is amended by adding the parenthetical statement "(Approved by the Office of Management and Budget under OMB control number 2137-0536)" at the end of subparagraph (10); paragraphs (b)(4) and (c)(4) are amended by removing the words "transport vehicle" and inserting, in their place, the words "conveyance or freight container"; paragraph (b)(5) is amended by removing the words "car or vehicle" and inserting, in their place, the word "conveyance"; paragraph (c)(1)(iv) is amended by removing the value "0.0001 millicurie" and inserting, in its place, the value "0.001 millicurie"; and paragraph (c) is amended by adding the parenthetical statement "(Approved by the Office of Management and Budget under OMB control number 2137-0534)" at the end of subparagraph (8).

§ 173.427 [Amended]

17. In § 173.427, paragraph (c) is amended by removing the reference "Table 10"; by removing the section reference "§ 173.443" and inserting, in its place, the reference "§ 173.433(a)"; and by removing the number "1000" and inserting, in its place, the number "100".

18. Section 173.431 is revised to read as follows:

§ 173.431 Activity limits for Type A and Type B packages.

(a) A Type A package shall not contain a quantity of radioactivity greater than A_1 (for special form radioactive material) or A_2 (for normal form radioactive material) as listed in § 173.435, or for radioactive materials not listed in § 173.435, as determined in accordance with § 173.433.

(b) The limits on activity contained in a Type B, Type B(U), or Type B(M) package are those prescribed in § 173.416 or in the applicable approval certificate under §§ 173.471 or 173.473.

§ 173.433 [Amended]

19. In § 173.433, paragraph (b)(3) is amended by removing the denominator " $A_1 R_n$ " and inserting, in its place, the denominator " $A_1(R_n)$ "; and paragraph (b)(5) is amended by removing the word "Were" and inserting, in its place, the word "When".

20. In § 173.435, the table is amended by removing the column headed "Specific activity (Ci/g)", by adding the terms "special form" and "normal form" to the columns headed A_1 and A_2 , respectively, and by revising the following entries to read as follows:

§ 173.435 Table of A₁ and A₂ values for radionuclides.

Symbol of radionuclide	Element and atomic No.	A ₁ (Ci) (special form)	A ₂ (Ci) (normal form)
230 _{Pa}	Protactinium (91)	20	0.8
170 _{Tm}	Thulium (89)	300	10
171 _{Tm}		1000	100

21. In § 173.441, paragraph (b) is amended by removing the words "Except for shipments by air,"; paragraphs (b)(1)(ii), (b)(2), (b)(3) and (b)(4) are amended by adding the word "transport" immediately preceding each use of the word "vehicle"; paragraph (c) is amended by adding the parenthetical statement "[Approved by the Office of Management and Budget under OMB control number 2137-0536]" at the end of the paragraph; and paragraphs (d) and (e) are added to read as follows:

§ 173.441 Radiation level limitations.

(d) Packages exceeding the radiation level or transport index prescribed in paragraph (a) of this section shall not be transported by aircraft.

(e) The written instructions required for exclusive use shipments must be sufficient so that, when followed, they will cause the carrier to avoid actions which will unnecessarily delay delivery or unnecessarily result in increased radiation levels or radiation exposures.

22. In § 173.443, Table 10 is amended by removing the heading "Removable External Radioactive Contamination Limits" and inserting, in its place, the heading "Removable External Radioactive Contamination—Wipe Limits"; paragraph (d) is amended by adding the words "by public highway" immediately following the word "transportation"; and paragraph (b) is revised to read as follows:

§ 173.443 Contamination control.

(b) Except as provided in paragraph (d) of this section, in the case of packages transported as exclusive use shipments by rail or public highway only, the removable (non-fixed) radioactive contamination on any package at any time during transport shall not exceed ten times the levels prescribed in paragraph (a) of this section. The levels at the beginning of transport shall not exceed the levels

prescribed in paragraph (a) of this section.

§ 173.448 [Amended]

23. In § 173.448, paragraph (g)(1)(ii) is amended by removing the quoted text "number of curies" and inserting, in its place, the quoted text "activity".

§ 173.453 [Amended]

24. In § 173.453, paragraph (c)(3) is amended to show the correct spelling of the word "fissile", and the word "that" is added immediately following the word "except".

§ 173.455 [Amended]

25. In § 173.455, paragraph (b) is amended by adding the term "conveyance and" immediately preceding the word "vehicle".

§ 173.457 [Amended]

26. In § 173.457, paragraph (b) is amended by removing the words "transport vehicle" from paragraphs (b)(1) and (3) and inserting, in their place, the words "conveyance (transport vehicle if transported by public highway or rail)", and by adding the parenthetical statement "[Approved by the Office of Management and Budget under OMB control number 2137-0535]" at the end of paragraph (b)(4).

§ 173.459 [Amended]

27. In § 173.459, paragraph (a) is amended by removing the words "transport vehicle" and inserting, in their place the words "conveyance (transport vehicle if transported by public highway or rail)"; and paragraph (b) is amended by removing the word "load" and inserting, in its place, the words "conveyance (transport vehicle if transported by public highway or rail)".

28. In § 173.461, paragraph (a)(1) is revised to read as follows:

§ 173.461 Demonstration of compliance with tests.

(a) (1) By performance of tests with prototypes or samples of the packaging or special form material as normally presented for transportation, in which case the contents of the packaging for the test shall simulate as closely as practicable the expected normal radioactive contents. The use of non-radioactive substitute contents is encouraged provided that the results of the testing take into account the radioactive characteristics of the contents for which it is being tested;

29. In § 173.465, paragraph (a) is amended by adding the words "with proposed contents" immediately following the word "packaging"; paragraph (b) is amended to show the correct spelling of the word "centimeters"; and Table 11 is amended by adding the symbol " " immediately preceding the figures "10,000" and "22,000" in row 1 and columns 1 and 2, respectively; paragraph (d)(2) is amended by removing the number "225" and inserting, in its place, the number "265", and by removing the word "vertically" and inserting, in its place, the word, "horizontally"; and the section heading is revised to read as follows:

§ 173.465 Type A packaging tests.**§ 173.469 [Amended]**

30. In § 173.469, paragraph (a) is amended by adding the words " , such as the use of non-radioactive contents," between the words, "material" and "shall"; paragraph (b)(2)(iv) is amended by removing the word "to" and inserting, in its place, the word "of"; paragraph (b)(3)(v) is amended by removing the measurement "(.12 inch)", and by removing the measurement "(.012 inch)" and inserting, in its place, the measurement "(.12 inch ± .012 inch)".

§ 173.471 [Amended]

31. In § 173.471, the introductory text is amended by adding the words " , Type B(U), Type B(M)," immediately following the letter "B".

32. In § 173.473, the introductory text is amended by adding the words " , Type B(U), Type B(M)," immediately following the letter "B"; paragraph (c) is amended by removing the word "and"; paragraph (d) is redesignated paragraph (e); and a new paragraph (d) is added to read as follows:

§ 173.473 Requirements for foreign-made packages.

(d) All requirements of the foreign competent authority certificate and the U.S. Competent Authority revalidation shall be fulfilled; and

§ 173.475 [Amended]

33. In § 173.475, paragraph (f) is amended by removing the word "improperly" and inserting, in its place, the word "properly".

34. In § 173.476, paragraph (a) is amended by adding a sentence at the end of the paragraph; paragraph (c) is

amended by adding a comma between the words "Material" and "Special"; and the introductory text of paragraph (b) is revised to read as follows:

§ 173.476 Approved of special form radioactive materials.

(a) * * * An IAEA Certificate of Competent Authority issued for the special form material may be used to satisfy this requirement.

(b) Prior to the first export shipment of a special form radioactive material from the United States, each shipper shall obtain a Competent Authority Certificate for the specific material. For special form material manufactured outside the United States an IAEA Certificate of Component Authority from the country of origin may be used to meet this requirement. For special form materials manufactured in the United States each shipper shall obtain a U.S. Competent Authority Certificate for the specific material. Each petition for a U.S. Competent Authority Certificate shall be submitted in accordance with § 173.471(e) and must include the following information:

§ 173.477 [Amended]

35. In § 173.477, paragraph (b) is amended by removing the word "vehicle" in subparagraph (2) and inserting in its place, the word "conveyance"; and by adding the parenthetical statement "(Approved by the Office of Management and Budget under OMB control number 2137-0532)" at the end of paragraph (b)(3).

§ 173.478 [Amended]

36. In § 173.478, paragraphs (b) and (c) are amended by adding the parenthetical statement "(Approved by the Office of Management and Budget under OMB control number 2137-0532)" at the end of paragraphs (b)(4) and (c)(2), respectively.

PART 174—CARRIAGE BY RAIL

37. In § 174.700, paragraph (g)(1) is amended by removing the word "and"; paragraph (g)(2) is amended by removing the word "vehicle" and inserting, in its place, the words "rail car", by removing the word "must" and inserting, in its place, the word "shall", by removing the period and inserting, in its place "; and"; and paragraph (g)(3) is added to read as follows:

§ 174.700 Special handling requirements for radioactive materials.

(g) * * *
(3) The radiation level shall not

exceed 2 millirem per hour in any normally occupied position in the transport vehicle or adjacent rail car.

PART 175—CARRIAGE BY AIRCRAFT

38. In § 175.703, paragraph (c)(1) is amended by removing the word "sole" in both uses and inserting, in its place, the word "exclusive"; and paragraph (e) is revised to read as follows:

§ 175.703 Other special requirements for the acceptance and carriage of packages containing radioactive materials.

(e) Packages with radiation levels at the package surface or a transport index in excess of the limits specified in § 173.441(a) of this subchapter may not be transported by aircraft except under special arrangements approved by MTB.

PART 176—CARRIAGE BY VESSEL

39. In § 176.700, paragraphs (c) and (d) are revised and paragraph (e) is added to read as follows:

§ 176.700 General stowage requirements.

(c) Each Fissile Class III shipment must be stowed in a separate hold, compartment, or defined deck area and be separated by a distance of at least six meters (20 feet) from all other Radioactive Category II- or III-Yellow labeled packages.

(d) For a shipment of radioactive materials requiring supplemental operational procedures, the shipper must furnish the master or person in charge of the vessel a copy of the necessary operational instructions.

(e) A person may not remain unnecessarily in a hold, or compartment, or in the immediate vicinity of any package on deck, containing radioactive materials.

PART 177—CARRIAGE BY PUBLIC HIGHWAY

§ 177.842 [Amended]

40. In § 177.842, paragraph (g) is amended by adding the word "motor" between the words "the vehicle" in both instances.

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53, App. A to Part 1)

Issued in Washington, D.C., on June 29, 1983.

L. D. Santman,

Director, Materials Transportation Bureau.

[FR Doc. 83-18190 Filed 7-6-83; 8:45 am]

BILLING CODE 4910-60-M